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Mrs. Michelle Sheehan
Supervisor, State Land Conservation Program
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908

Subject: The Narragansett Electric Company d/b/a Rhode Island Energy
L14 and M13 Mainline Rebuild Project
Supplemental Salt Marsh Mitigation Plan for the Coastal Resources Management
Council (CRMC) Category B Assent

Dear Mrs. Sheehan:

The Narragansett Electric Company d/b/a Rhode Island Energy (the Company) received an email from the Rhode Island Department of Environmental Management (RIDEM) on July 18, 2024, regarding several clarifying questions and comments to the supplemental salt marsh mitigation plan submitted to the Coastal Resources Management Council (CRMC) for the Category B Assent Application submitted by the Company on June 14, 2024. POWER Engineers, Inc. (POWER), on behalf of the Company, has formalized the following responses to the information request posed by RIDEM. Additionally, during the period in which the Company has reviewed and responded to the agencies' request for information, the Company has further improved and advanced the mitigation plans, and means and methods, please see the attached Updated Appendix K, enclosed. The following responses reference updates included in the enclosed updated plans.

Question 1: *Was tidal monitoring performed to determine tidal elevation/frequency of flooding and verify whether the proposed subgrade elevation of 3' will result in the successful establishment of low marsh within the subject area given that EL 3' is noted to be the approximate upper limit of the existing marsh?*

Response: The updated plans reflect an extension on the eastern side of the salt marsh mitigation area to the existing EL 3'. The extension of the salt marsh mitigation area will allow for better tidal flow to support the success of the salt marsh habitat by allowing for a more even ground elevation from the existing wetland at EL 3' and will eliminate a potential pooling barrier at the southeastern corner where there is existing wetland at EL 4-5' which potentially would have prevented tidal flow from reaching the southern portion of the mitigation area.

The updated plans do include some temporary impacts to existing wetland to extend the mitigation area to the 3' contour line on the eastern side of the mitigation area to ensure a hydrologic connection with the existing salt marsh. Excavation to the 3' contour line will involve removing the overburden, including the removal of existing *Phragmites* (*Phragmites australis*), resulting in a net benefit to the salt marsh mitigation area. This excavation will control and remove invasive *Phragmites*, supporting the overall success of the mitigation area (see more on *Phragmites* removal in the response to Question 2). The extension to the 3' contour line on the southeastern section of the mitigation area will provide mitigation to the existing salt marsh. Overall, this means and methods will allow for a



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better blending of grade and habitat, as well as integration into the existing smooth cordgrass. It is expected that the area will result in successful establishment of low marsh since it will match the adjacent elevation of the existing salt marsh.

To determine the location of the mitigation area, visual observations and historic data and imagery were used to determine the tidal elevation and frequency of flooding near the proposed salt marsh mitigation area. Tidal data from National Oceanic and Atmospheric Administration's (NOAA) tidal datum station number 8451552 Bristol Ferry, RI (Source: <https://tidesandcurrents.noaa.gov/datums.html?id=8451552>) and Buzzards Bay National Estuary Program Interactive Tidal Datum Viewer (Source: <https://buzzardsbay.org/technical-data/tidal-datums-ma/interactive-tidal-datum-viewer/>) were also referenced to note the area's tidal datum elevations. Buzzards Bay National Estuary Program notes that the salt marsh range nearest to the mitigation area is at EL 3.76'. While NOAA's tidal datum notes that the Mean Higher High Water (MHHW) is at EL 4.48' and Mean High Water (MHW) at EL 4.23'. This information additionally suggests that the mitigation area proposed at elevation 3' to 4' will experience tidal flows and will fall within the salt marsh range and support a successful mitigation site.

1b. Also, it is unclear whether proposed EL 3' is the finished grade (following addition of at least 12" of topsoil) as depicted/described within the plan, which calls for excavation to the grades depicted on the plan and the addition of organic material if needed—I presume the area would be excavated to a lower elevation if there is a need to establish an organic layer to maintain proposed grades as depicted on the plan? If so, this should be clarified to ensure that the desired grade(s) required to create suitable hydrologic conditions/tidal regime and salinity level, which are needed to facilitate the development of a viable marsh, are properly achieved during construction.

Response: Yes, the proposed finished grade at the eastern and northern most extent of the mitigation area is at 3' ground elevation (EL) and blends to meet the existing wetland at EL 3'. Please see the response above to Question 1 regarding the changes to the salt marsh mitigation plans, updated Appendix K. The elevation shown on the plans will be the final elevation of the salt marsh mitigation area (elevation 3').

The proposed salt marsh mitigation area is currently upland and will be excavated and converted to salt marsh. Based on field investigations, the proposed mitigation site consists of compacted gravel fill at the ground surface and continuing to depth of 8" below the ground surface. It is anticipated that a buried organic horizon is present below this gravel fill which will be used for the mitigation area and be available for natural regeneration of native saltmarsh vegetative growth. However, as part of the site preparation, the area will be over-excavated to a slightly lower elevation than the 3' ground elevation—but not excavated to more than 2' below ground elevation. This will allow for up to 12" of backfill. The up to 12" of backfill is a conservative estimate to ensure that a proper growing medium is provided for the proposed plantings. This will include mostly clean, medium-coarse sand, and will be topped with approximately 2" of organic-rich topsoil to create a proper growing medium suitable for the proposed salt marsh plantings. The preferred topsoil will not be mixed with compost or mulch, as these additives can alter the soil pH. The final finished grade of the lower sections of the salt marsh area will be at 3' EL while the higher marsh areas will range from 3' to 5' EL.

The backfill will compose of medium-coarse sand and will then be layered with topsoil due to the anticipated tidal flow and the likelihood of the organic soil to wash away and the potential to compromise the success of the mitigation area. This combination will provide a more stable, heavier top layer that is less susceptible to erosion from tidal flow, thereby supporting the establishment of



plantings. The preferred vendor of sand and topsoil is expected to be a local Rhode Island or New England supplier.

As stated above, the proposed mitigation area will be graded to similar elevations as adjacent existing salt marsh. Based on observations of the adjacent existing salt marsh it is anticipated that low marsh hydraulic conditions will be observed at EL 3' and high marsh at 4' EL. With upland conditions found at EL 5'.

Question 2: Photo #1 depicts *Phragmites* in the foreground which appears to fall within the footprint of excavation. What soil management practices will be employed during construction to prevent the introduction of *Phragmites* rhizomes within the proposed mitigation area and the surrounding locale—and how will the excavated soil be disposed of? Additionally, have any preemptive (i.e. pre-construction) control measures (e.g., chemical treatment) been considered to minimize the potential for *Phragmites* colonization of the mitigation area? Aside from hand-pulling during the two-year monitoring period, have any long-term measures been considered for the control of invasive species, particularly *Phragmites*, should the area become dominated by such species due to introduction via rhizome or marginal hydrology?

Response: *Phragmites* is present to various extents and densities in the vicinity of the proposed salt marsh mitigation area. The re-establishment of tidal flow into the proposed mitigation area is anticipated to significantly reduce the colonization of *Phragmites* within the mitigation area – similar to the effects from the restoration at Town Pond.

Additionally, as mentioned in response to Question 1, the extension of the boundary of the mitigation area to the 3' contour will allow for site preparation removal of *Phragmites* from much of the abutting area to the mitigation area. The rhizomes of *Phragmites* produce a dense mat that ranges from 10 cm (4 in) to 2.5 m (8 ft) below the soil surface. Rhizome depth is dependent on individual site conditions. The creation of the mitigation area to the required depths will result in up to 3 feet of excavation which could remove the majority of the existing *Phragmites* rhizomes giving opportunity for the plantings and native vegetation to grow.

To help further avoid and minimize the potential for the spread of invasive species, an invasive species management control plan will be followed as outlined in the submitted application. In addition, proper soil handling and management will be conducted during construction of the mitigation area and will include temporary onsite segregated stockpiling of the in-situ soils and subsequent disposal at an off-site approved Company location. The rough-graded mitigation area will be inspected for invasive plant species (e.g., *Phragmites australis*) or remnants of invasive plant species (e.g., *Phragmites* rhizomes) and any observed materials will be removed from the site. The final surface grading of the salt marsh mitigation area will be field surveyed to ensure that the proper elevation and topographic grades are established, so that the mitigation area will be inundated by the tidal cycle. The regular inundation of the mitigation area as well as placement of native plant species are expected to significantly reduce the colonization of invasive plant species within the mitigation area.

Sediment and erosion controls will also be installed; this Best Management Practice (BMP) may include silt fence which would be buried several inches below ground to assist with the sub-surface spread of *Phragmites*. If and when access may be required for future operation, maintenance or repair of the existing transmission assets, access to the mitigation area will be accomplished using temporary construction mats that will be required to be delivered to the site clean and absent of an invasive plant species, plants materials, plant remnants, or soils/sediments.



The post-construction monitoring of the mitigation area will involve an assessment for the presence and distribution of invasive plant species. Long-term measures for the control of invasive species will be determined during monitoring to address a specific invasive species, the extent of growth, and source of the species. Invasive plant species will be removed by hand during the monitoring events, and if further action is required, the Company will assess other possible corrective actions. The adjacent habitat areas do contain *Phragmites*. As a result, the seed source is present.

Question 3: *It is possible that Diamondback Terrapin may be present within the vicinity of the project area so work should be scheduled accordingly to prevent adverse impacts to turtle nests, hatchlings, or other wildlife species. A pre-construction wildlife sweep of the mitigation area and surrounding is strongly recommended to identify any important wildlife/habitat features that could be impacted by the subject work.*

Response: It is understood that the Northern Diamondback Terrapin may be present within the vicinity of the salt marsh mitigation area. The Northern Diamondback Terrapin is listed on the Rhode Island Species of Greatest Conservation Need (SGCN) 2015 Wildlife Action Plan list.

In Rhode Island, the Northern Diamondback Terrapin is known to inhabit coastal marshes and estuaries, which border quiet salt or brackish tidal waters. This species can also be found in mud flats, shallow bays, coves, and tidal estuaries. Adjacent sandy, dry, open-canopy, upland areas are required for nesting. Salt marshes are critical wintering, foraging, and nursery areas. The Northern Diamondback Terrapin generally nest in vegetated coastal dunes. The young spend the earlier years of life under tidal wrack (seaweed) and are very rarely observed. The Northern Diamondback Terrapin overwinters in the bottom of estuaries, tidal creeks and salt marsh channels.

The Company can commit to a pre-construction turtle sweep by the selected Project Wetland Scientist or Environmental Monitor. It is also understood that the active season for these Terrapins is approximately April through October, and that Terrapins generally nest from June to July. The preferred planting time for the salt marsh mitigation area is June, which is best for planting. The Company would like to commit to site-preparation in early April to May and to have everything planted early to mid-June. This would allow optimal time for the first growing season and to allow plantings to establish strong roots. The Company will begin hand-planting in May and will likely avoid both impacts from large machinery and the majority of Terrapin nesting season and will have all plantings in by mid-June 2025. If this scheduling is not possible, the proposed mitigation area will be inspected for the presence of the Northern Diamondback Terrapin and an environmental monitor will remain onsite during excavation activities and during mobilizing of vehicles and equipment to further ensure the protection of Terrapins.

Question 4: *It is unclear whether the intent is to sow the specified seed mix throughout the entirety of the mitigation area (as stated within the plan) or only within upland portions of the mitigation area above the cited EL 3'. Many of the species in the denoted seed mix are not typical of this habitat type and are not tolerant of tidal inundation.*

Response: A pre-selected seed mix will be sowed within the disturbed areas between the upland and high marsh areas of the mitigation area. In general, the seed mixture will facilitate the establishment of vegetative cover over portions of the mitigation site. As noted on the Mitigation Plans, the recommended seed mix is intended to serve as a reference for a custom seed mix that can be prepared with similar species. The updated Appendix K, enclosed, includes an updated seed mix table describing the example salt tolerant seed mix recommended for the mitigation area. The recommended mix is the New England Coastal Salt Tolerant Grass Mix which contains a selection of native grasses that tolerate salty conditions and are best obtained with a Spring seeding. The



preferred vendor for a source of the plant material is expected to be a local Rhode Island or Northeast supplier. The Company is also open to using an approved equivalent that may be suggested by the RIDEM.

Thank you for your attention to this matter. If you have any further questions, please do not hesitate to contact me at 401-439-3020 or jamie.durand@powereng.com.

Sincerely,



James Durand
Environmental Project Manager

Cc: Marc Smith, RIE
Leland Mello, RIDEM
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Attachments: Updated Appendix K

